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Dockets
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FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

JAN 5 1985

DOCKET FILE WITH ORIGINAL

IN REPLY REFER TO:
CN9406422

The Honorable J. James Exon
United States Senate
528 Senate Hart Building
Washington, DC 20510

RECEIVED
JAN 5 1985
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Dear Senator Exon:

This letter responds to an inquiry received from your constituent, Mr. Bill Richman with Woodmen Accident and Life Company. Mr. Richman expresses his concern regarding the auctioning of radio frequency spectrum on which unlicensed devices, operating under Part 15 of our rules, are permitted to operate. Mr. Richman believes that once this spectrum is auctioned, unlicensed devices would no longer be permitted in that spectrum or that the operators will be charged for using the spectrum.

As discussed in Section 309(j) of the Communications Act of 1934, as amended, 47 USC 309(j), Congress implemented legislation to provide for the auctioning of radio spectrum where there would be mutually exclusive applications for initial licenses or construction permits. There are two rule making proceedings currently under way in which the Commission proposes to auction spectrum that is also used by Part 15 devices. The first of these, PR Docket No. 83-61, concerns expansion of the applications permitted for Automatic Vehicle Monitoring systems currently allocated under Part 90 of our rules in the 902-928 MHz band. This band is also allocated for industrial, scientific, and medical (ISM) applications, U.S. Government radar systems, U.S. Government fixed and mobile operations, and the Amateur Radio Service. The second, ET Docket No. 94-32, addresses new operations in the 2402-2417 MHz band that was identified by the Department of Commerce for transfer from the Federal Government to private sector use. This latter band is allocated for ISM applications, U.S. Government radar systems, and the Amateur Radio Service.

The Commission permits unlicensed radio operation in spectrum that has been allocated for licensed radio services. The operation of unlicensed devices is permitted on a non-interference basis; that is, the unlicensed devices are not protected from any interference they receive, and the operator of the unlicensed device must correct any interference they cause to the licensed radio services.

We have not proposed to eliminate the use of unlicensed devices in the spectrum under consideration for auctioning in either of the pending proceedings. However, we recognize that increased use of the spectrum by licensed users may cause somewhat increased interference to existing Part 15 users. We have received a number of letters expressing concern about such interference, and the Commission is considering how to respond to these concerns in each proceeding. As such, we are placing copies of your letter in the docket files.

No. of Copies rec'd 2
List A B C D E

The Honorable J. James Exon
Page Two

Final action on our proposals to auction these portions of the spectrum is expected in the near future. Please call if I can provide additional information on these issues.

Sincerely,



Richard M. Smith
Chief
Office of Engineering and Technology

cc: Julius Knapp
Robert Bromery
Art Wall
Rick Engelman
Dockets for placement in the comment files for ET Docket 94-32
Dockets for placement in the comment files for PR Docket 93-61
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Chief, TSB

Chief, AED

J. JAMES EXON
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COMMITTEES:
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4231
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6422

December 22, 1994

Federal Communications Commission
Congressional Liaison
1919 M Street, N.W.
Washington, D.C. 20554

Dear Sir:

I am enclosing a letter from:

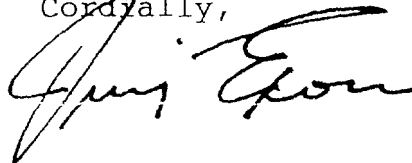
Bill Richman
Woodmen Accident and Life Company
P.O. Box 82288
Lincoln, NE 68501

whose problem appears to fall within your jurisdiction.

I would appreciate any information which will enable me to respond to my constituent's inquiry. Please return the enclosed correspondence with your report to:

Senator J. James Exon
ATTN: Doris Petersen
United States Senate
Washington, DC 20510

Cordially,



Jim Exon
United States Senator

Enclosure



WOODMEN ACCIDENT AND LIFE COMPANY₂₁

December 12, 1994

Senator James Exon
528 Hart Building
Washington, D.C. 20510-2702

Dear Senator Exon:

As you may recall, I wrote to you approximately six weeks ago to voice my concern regarding the FCC's practice of auctioning radio spectrum licenses to private industry. In your reply, you stated that you had, in the past, urged the FCC to seek technological solutions to the problem of limited available spectrum. While electronic and computer technology are capable of a great deal, and continue to make great strides forward every day, one thing technology *cannot* do is create additional radio spectrum. While technologies such as data compression can help to make the most use of the available spectrum, there are limits to what can be done, and once all the available spectrum has been licensed, there will be no more. As stated in the enclosed article, individuals and companies who currently use low-power devices were previously *allowed to operate unlicensed by the "Part 15" FCC rules*. **If the portion of the spectrum previously protected by Part 15 is sold out from under them, these users will be left out in the cold, with expensive equipment they will be prevented from using by the FCC!** The equipment in question was developed (at substantial cost to the companies involved) for low-power, unlicensed operation at the frequencies in question **with the encouragement of the FCC**; now the FCC seems intent on taking away the portions of the spectrum they themselves promoted the development of. I, for one, will not be at all pleased if I begin receiving bills from companies with whom I have signed no contract for using the cordless telephone or wireless computer network I purchased with the understanding that no license was required, and that there was no charge for using the frequencies. While I understand the attraction of being able to help balance the federal budget by auctioning off portions of the radio spectrum, a resource that the general public seems to have little or no concept of anyway, doing so at the expense of millions of existing users who were recently *encouraged* to use this portion of the spectrum *by the FCC* is ludicrous. **Many of the current users may not even be aware that their equipment uses portions of the spectrum which are about to be taken away from them.** You must consider *why* many large telecommunications companies are *lining up*

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eagerly to hand over huge sums of money for the right to control this resource. **They know there is a tremendous amount of money to be made by charging the public to use something that is currently public property.** When was the last time you saw corporate greed and the good of the public coincide? Allowing this resource to fall under the control of large corporations **is not in the public interest in any way.** I urge you to contact the FCC Office of Engineering to get the real story on the impact the auction of the Part 15 bands will have, and then do your best to protect this small remaining bit of the radio spectrum which is still available to the public.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Richman". The signature is stylized with a large, bold "B" and a long, sweeping horizontal line extending to the right.

Bill Richman
Network Administrator
Woodmen Accident and Life Co.

to make big inroads in the financial industry here as the preferred equipment vendor to customers of National Fiber Network, Inc. (NFN), a new dark fiber supplier.

The bonanza for users: an end run around local exchange carriers (LEC) to obtain virtually unlimited capacity, with no variation in cost as bandwidth needs change.

For example, NFN is leasing dark fiber capable of carrying the equivalent of 48 T-3 channels at \$140 per mile per month.

Since dark fiber comes with none of the electronics needed to transmit data or voice, the user must install much the same type of

See Dark fiber, page 28

Some users and analysts said 4.1 overcomes the highest hurdles customers face in upgrading to 4.X, but others remain unconvinced and cite application compatibility issues, among other concerns.

According to William Donahoo, director of product

Server 6.5%
Banyan
VINES 2.9%
Digital
Pathworks 1.7%
Other 10.0%

Novell this week will ship NetWare 4.1, the success of which may determine how long the company holds on to its market lead.

Total: 851,000 licenses

SOURCE: IDC, FRAMINGHAM, MASS.

VINES users have been reluctant to move to NetWare, pointing to Novell's lack of directory services functionality as compared to Banyan's respected StreetTalk offering. However, VINES users may be ready to

See Banyan, page 72

See Me Hear Me VIDEOCONFERENCING

Our investigation of two alternatives for point-to-point videoconferencing with electronic whiteboards uncovers many features that need improvement.
Page 47.

NETWORK
WORLD
TEST
alliance

No spectrum is sacred as FCC begins auctions

BY ELLEN MESSMER

Washington, D.C.

The Federal Communications Commission this week will begin auctioning off radio spectrum to industry bidders eager to acquire all the bandwidth they can for new wireless services.

The auctions, expected to net \$10 billion for the U.S. Department of the Treasury by the time they end, will force the eviction of hundreds of microwave users in the 2-GHz bands. But these users — many from utility companies — are getting off easy. Future spectrum auctions are expected to be even more harsh on

government microwave users and users of uncensored data equipment.

The microwave users that find their spectrum purchased next week for new personal communications services (PCS) have to be compensated for their relocation costs by the winning bidders.

Thirty bidders, mostly organized into consortia, are well heeled and have already put up more than \$500 million in advanced payments to the FCC.

Sprint Corp. is leading one telecommunications consortium, while several cable TV

See Spectrum, page 71

Cisco carves topology data path

BY JIM DUFFY

San Jose, Calif.

Cisco Systems, Inc. is working to create a standard for extracting network configuration information from disparate management tools and network devices, according to sources familiar with the effort.

The objective is to present this information in a common way that would help users better document network resources and easily transfer information within their organization, or to service and support providers, sources said.

The router vendor has contracted with Steve Waldbusser, manager of network development at Carnegie Mellon University in Pittsburgh, to draft a white paper for a standard ASCII format to compile and export such network topology information.

See Cisco, page 71

INSIDE



Apple's Michael Spindler, IBM's Ellen Hancock, AT&T's Pat Russo and Peter Pribilla of Siemens Roim last week started a standards charge, but not everyone is following. See story, page 6.

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Spectrum

Continued from page 1

companies have formed WirelessCo, L.P. In addition, NYNEX Corp., Bell Atlantic Corp., US WEST, Inc. and the Pacific Telesis Group spin-off AirTouch Communications have formed PCS Primeco, L.P.

Microwave users losing their spectrum will be allowed to migrate to new frequencies. These guidelines, issued more than two years ago by the FCC, which at that time was chaired by Al Sikes, determined that microwave and the new PCS could not coexist in the 2-GHz band, so microwave users would have to go.

The commission, now stewarded by Chairman Reed Hundt, is considering its own spectrum auctioning plans for the future. It wants to auction off spectrum for new services in shared bands used today by devices such as wireless LANs and handheld computers — all operating on an unlicensed basis under the so-called Part 15 rules.

Medical, industrial and scientific equipment, as well as microwave ovens and amateur radio, also use the Part 15 bands. The continued operation of all this equipment is now in question.

The FCC is proposing to auction off 15 MHz in the 2.4-GHz Part 15 band, prohibiting use of unlicensed devices. Plans are also on the table to auction off 16 MHz in another Part 15 band — 902 MHz to 928 MHz — to the automated vehicle tracking service providers, such as AirTouch.

Users of unlicensed devices will not be compensated for their loss. Nor will new unlicensed bands be made available to them.

The FCC has stated it may consider letting the Part 15 equipment continue to operate along with a licensed service in the bands.

But the Part 15 auction plans ignore the advice of the FCC's own Office of Engineering, which last August vehemently opposed selling off the Part 15 bands.

That report, sent to the Department of Commerce, said millions of Part 15 devices are in use, and "it is unlikely that a licensed service would be able to share this band with these devices."

"Coexistence with a service provider and Part 15 devices is difficult, if not impossible," said Steve Sharkey, an FCC engineer. "A commercial provider will have the right to shut them down, and the commission would probably be the one to enforce that."

Nonetheless, the FCC wants to sell Part 15 to raise money and figures people will end up paying for services they now get for free.

Wireless LAN vendors, including Windata Corp., Symbol Technologies, Inc. and Zircom Corp., are alarmed about the FCC's plan, which not only imperils existing equipment, but also shoots a hole in the 802.11 wireless LAN standard now under development.

"Ten years ago, the FCC encouraged us to develop equipment for these bands," said Lou Piazza, Windata's president, who noted that Europe and Japan have also set up a 2.4-

GHz unlicensed band. "The FCC's actions are inconsistent."

The recommendation to auction off the 2.4-GHz Part 15 originated with the Commerce Department's National Telecommunications and Information Administration (NTIA), which manages the government spectrum [the FCC manages the private-sector spectrum].

Under the Omnibus Reconciliation Act of 1993, Congress ordered the NTIA to turn over 200 MHz of government spectrum to the private sector — 50 MHz immediately and another 150 MHz to be identified at a later date for slower transition.

An NTIA source who requested anonymity said the Part 15 band was an easy choice for the first 50-MHz transfer. "The Part 15 users have zero rights," he noted.

However, the 200-MHz mandate from Congress will mean pain for government users in the future.

In February, the NTIA will hand eviction notices to government microwave users in the 1.7-GHz bands so the NTIA can hand that spectrum over to the FCC for auction, too.

That decision will impact the department of Transportation and Agriculture, the Coast Guard and the Federal Aviation Administration, among others. "Under federal law, these agencies are not allowed to accept compensation from the private sector," the NTIA source said. "We're carrying a millstone around our necks." □

Comments?

See "How to reach us" on the back page.

Signs of concern

Congress appears to be questioning the repercussions of the legislation it passed last year ordering the transfer of 200 MHz of government spectrum to the private sector.

"The 200-MHz legislation was written to force the government to become more efficient in its use of spectrum," said David Leach, professional staff member of the House Energy and Commerce Committee who helped draft the bill, which was sponsored by Rep. John Dingell (D-Mich.). "It wasn't written to hurt the Part 15 industry."

The Federal Communications Commission's upcoming authorization bill, which just passed the House and must now win approval from the Senate, counsels the FCC to protect the Part 15 industry when it faces competing demands for new allocations from service providers.

"A major consideration in the commission's deliberations must be the current deployment of these devices around the country," the House legislation states.

Congress wants the commission to resolve the Part 15 question "in a manner that is acceptable to the millions of people who own and operate Part 15 devices," as well as to the service providers that are willing to spend millions to get Part 15 spectrum.

BY ELLEN MESSMER

Memorex

Continued from page 6

marketing for Memorex.

HSDP consists of software that resides as an application on both the 9432 and the MVS system. It uses a proprietary protocol to send LAN data back and forth between the gateway and the mainframe at speeds of up to 2M byte/sec.

According to Tuttle, this is at least double the performance of most LAN-to-mainframe gateways and is

Cisco

Continued from page 1

Cisco and Waldbusser may also submit a request for comment to the Internet Engineering Task Force for this standard topology format.

Cisco officials could not be reached for comment.

Currently, users have multiple views of the network based on the products they are

uration information or send it as screen captures, they said.

"We don't have a unified view of most topology," said Chris Amley, network management architect at 3M Corp. in St. Paul, Minn. "It is a serious problem for us."

3M's IP network topology is represented by Hewlett-Packard Co.'s HP OpenView. But the same view OpenView provides for IP cannot be extended to other routed protocols nor to media access control layer protocols, such as Spanning Tree, Amley said.

this idea and expand it" to event and historical data, she added.

"Putting an RFC behind it will carry a lot more weight" than if Cisco attempted to define the format by itself, she added.

The downside to the Cisco effort, according to Huntington-Lee, is that standards do not satisfy everyone. Vendors could determine that an ASCII topology format is insufficient for representing their products and, therefore, add extensions to the standard or ignore it altogether.